

REMARKS

The present Amendment is in response to the Office Action having a mailing date of May 14, 2004. Claims 10-21 are pending in the present Application. Claims 10-21 are rejected. Claims 10 and 16 have been amended to overcome Examiner's objections. Claims 11-12 and 17-19 have been cancelled. Consequently, claims 10, 13-16 and 20-21 remain pending in the present application.

Claim Rejections-35 USC 112

The Examiner states,

2. Claims 10-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

It appears that the original specification does not have support for:

"the at least one metal being of sufficient thickness to carry a high current," which were not described/supported in the specifications.

Applicant has amended claims 10 and 16 to overcome this rejection.

Claim Rejections-35 USC 103

The Examiner states,

3. Claims 10-21 are rejected under U.S.C. 103(a) as being unpatentable over Yamada (6,008,127) in view of Dausch et al (6,359,374 B1).

Regarding claim 10, 16, Yamada, figures 1-38 (figures 33, 35, 36, 37, col. 8, lines 52-67, col. 9, lines 1-67), disclose a semiconductor device comprising: a semiconductor substrate 201 including a plurality of device structures (see figure 35) thereon; and an interconnect 235 on the semiconductor substrate, the interconnect comprising at least one slot 235 (see figure 33) provided in the semiconductor substrate and at least one metal 235 (aluminum) within the slot, wherein the at least one slot is oxidized everywhere (see col. 8, lines 52-67) except at the bottom of the slot where the interconnect forms a ground 225 (see col. 9, lines 58-65). Yamada fails to teach the at least one metal being of sufficient thickness to carry a high current.

However, Dausch, figures 1-4, and related text on col. 1-10, (col. 5, lines 14-24, col. 6, lines 24-58) teach at least one metal being of sufficient thickness to carry a high current. Regarding to claims 11-21, see Yamada, col. 1-14, and Dausch, col. 1-10.

It would have been obvious to one having ordinary skill in the art at the time of the present invention to apply the teachings of Dausch into the method of Yamada as both are related to the same subject matter of providing a high voltage semiconductor device including an interconnection layer having at least one metal within a slot. The conductive metal with sufficient thickness to carry a high current.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; Yamada '031 is cited as of interest.

Yamada is directed to a process for fabricating a semiconductor device using an etching stopper film. Dausch is directed to a miniature electric relay. Neither Dausch or Yamada singly or in combination describe or suggest "an interconnect including a plurality of metals within the slot, wherein the plurality of metals comprises three metals, wherein the first and second metals fill the slot and the third metal provides an interconnect layer" as recited in claims 10 and 16. There is further no teaching that the interconnect would form a ground strap as recited in the claims. Accordingly, claims 10 and 16 are allowable over the cited references.

Claims 13-15 and claims 20-21 are similarly allowable since they depend from an allowable base claim.

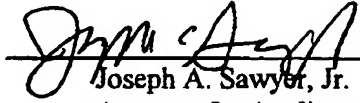
Accordingly, Applicant respectfully submits that claims 10, 13-16 and 20-21 are now all in allowable form. Consequently, allowance and passage to issue of claims 10, 13-16 and 20-21 of the present application are respectfully requested.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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August 6, 2004
Date



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